

## ABSTRACT

A method and apparatus for optimizing multicast traffic in a VLAN-tagged environment is disclosed. The method, implemented by a cross-VLAN switching device, comprises

5 the steps of receiving a multicast stream within a first VLAN of a plurality of VLANs configured thereon, and internally distributing the multicast stream towards substantially all the multicast group members registered at the cross-VLAN switching device to receive the multicast stream. Distribution of the multicast stream preferably comprises

10 the steps of internally routing the multicast stream from the first VLAN to each VLAN in which there is a multicast group member registered to receive the multicast stream and then switching the multicast stream from each VLAN in which it is present in a cross-VLAN switching device to substantially all of the multicast group members registered to receive the multicast stream. In accordance with the invention, only a single copy of a

15 multicast stream propagates across said one or more VLAN-tagged communications links, thereby avoiding one or more duplicative multicast streams that generally occur when there are multicast group members in a plurality of VLANs.